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An Assessment of the Economic Implications of Redesigning the Foster Care System in Selected Counties and the State of Texas

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Introduction

More than 16,000 Texas children are presently in foster care. This crucial safety net for thousands of the state's most vulnerable residents has experienced some challenges in recent years and is in the process of evolving in an innovative manner to better meet the needs of the affected young people at a critical juncture in their lives. While the primary consideration in any conversation related to transforming the foster care

The purpose of foster care redesign is “to improve safety, reduce the time to permanency, increase stability and grow capacity for children in Texas’ system, while improving the well-being of the children and families receiving services.”

system must always be the well-being of the children and families who are affected, improvements also involve quantifiable economic benefits in the form of reduced social costs and increased earnings and productivity. Analyzing these economic benefits can help inform discussion of future strategic plans, particularly given the reality of tight budgets for social services.

Foster Care Redesign (FCR) is part of the Department of Family and Protective Services (DFPS) Child Transformation Plan authorized in 2007 by Senate Bill 758. The purpose of FCR is “to improve safety, reduce

the time to permanency, increase stability and grow capacity for children in Texas’ foster care system, while improving the well-being of the children and families receiving services.”¹

Successfully redesigning foster care in Texas not only can have immeasurable benefits for the individuals involved, but can also both

- increase the opportunities and future earnings potential of affected young people and
- decrease the quantifiable costs of child maltreatment through better safety and stability.

¹ Foster Care Redesign Implementation Plan, Texas Department of Family and Protective Services, April 2015.

The Perryman Group was recently asked to study the potential economic and fiscal effects of Foster Care Redesign in the Region 3b service area and the state of Texas. This report presents findings from the analysis.

SUMMARY OF FINDINGS FROM THE PERRYMAN GROUP'S ANALYSIS:

*Foster Care Redesign not only can improve lives of Texas children, but also makes economic and fiscal sense, with every \$1 of State funding returning an estimated **\$3.44** in revenue to the State over the long term.*

Better serving and protecting Texas children is, of course, the primary reason for reforming the foster care system. However, improving outcomes through redesign can lead to increased productivity and earnings as well as reductions in social costs associated with child maltreatment.

Estimated Lifetime Economic Benefits of Foster Care Redesign in the Region 3b Service Area* (Assumes the Our Community Our Kids approach for the 2015 Cohort)		
(Monetary Values in Millions of Constant 2015 Dollars)		
	Region 3b	Texas
Total Expenditures	\$415.521	\$463.826
Gross Product	\$204.487	\$222.540
Personal Income	\$127.913	\$138.412
Retail Sales	\$60.830	\$63.137
Employment (Person-Years)	2,355	2,513
<p>*Includes estimated effects of reductions in social costs (social assistance, health care, education, and crime) and improvement in income and productivity associated with the foster care redesign programs. The projected improvements are based on outcomes achieved in other areas employing comparable approaches, with appropriate adjustments. The analysis makes use of an "incidence" approach which examines the lifetime impact from a single annual cohort (2015 in this case). These effects will thus be duplicated each year. Texas results reflect the statewide economic benefits of redesign within the Region 3b area only. Values are expressed in constant (2015) dollars and are discounted at a 3% real (inflation-adjusted) rate. More detail is provided in the Appendices to this report.</p> <p>SOURCE: The Perryman Group</p>		

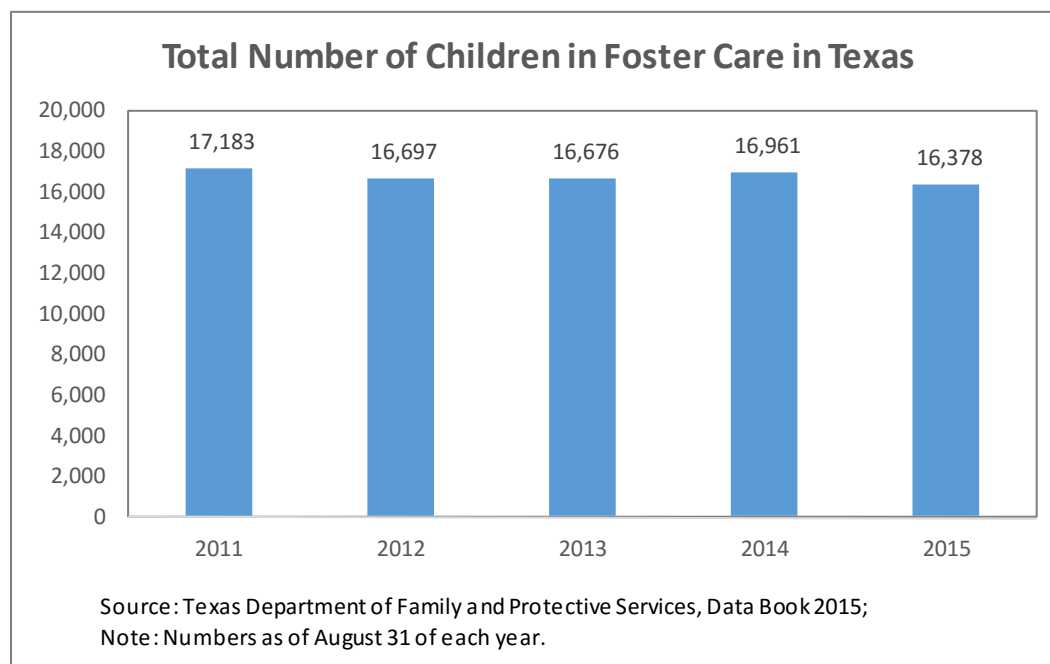
Economic activity associated with redesign in Region 3b generates incremental **tax receipts to the State of an estimated \$12.4 million** over the long term, with another **\$6.0 million to local government entities** for each cohort of new entries to the system.

If redesign were implemented statewide, the economic and fiscal benefits would be much larger.

Foster Care in Texas

Texas has one of the largest foster care systems in the United States. Administering the system from a central location in Austin has contributed to a number of challenges. In addition, complexities in oversight, payment, and other aspects of the process at times hampered the ability of the system to meet the needs of the youth of Texas.

As of August 31, 2015 almost 16,400 Texas children were in some type of foster care,² of a total population of Texas youth age birth to 17 in 2015 of just over 7.3 million. There were an additional 11,517 children in other non-foster care types of substitute care in 2015, with the vast majority (10,355) of those in kinship care.³



² Texas Department of Family and Protective Services, Data Book 2015.

³ Texas Department of Family and Protective Services, Data Book 2015.

Foster Care Redesign involves a shift from a statewide to a community-based foster care model.

Foster Care Redesign changes the way the Department of Family and Protective Services procures, contracts, and pays for foster care and other services to children in foster care and their families. The key change is a shift from a statewide to a community-based foster care model in which a single contracted entity, the Single Source Continuum Contractor (SSCC), is responsible for ensuring the full continuum of foster care and other services for children in specific geographic areas (catchment areas) and is accountable for these children achieving positive outcomes while in foster care.⁴

The success of the contractor is determined by measuring performance against the primary objectives of safety, permanency, and well-being.⁵ **Safety** is the primary objective, with a focus on

- ensuring there are sufficient high-quality foster care placement options,
- having strong oversight capabilities over all placements, and
- providing strong training for all providers as well as building robust risk management processes.⁶

Permanency involves placing each child in foster care into a permanent living arrangement either through reunification, permanent placement with a relative, or adoption.⁷ The goal is to shorten the time to permanency while at the same time ensuring the child's safety and well-being. **Well-being** involves protecting the quality of children's and families' lives to ensure the best possible outcomes.⁸

⁴ Foster Care Redesign Implementation Plan, Texas Department of Family and Protective Services, April, 2015.

⁵ Foster Care Redesign Implementation Plan, Texas Department of Family and Protective Services, April, 2015.

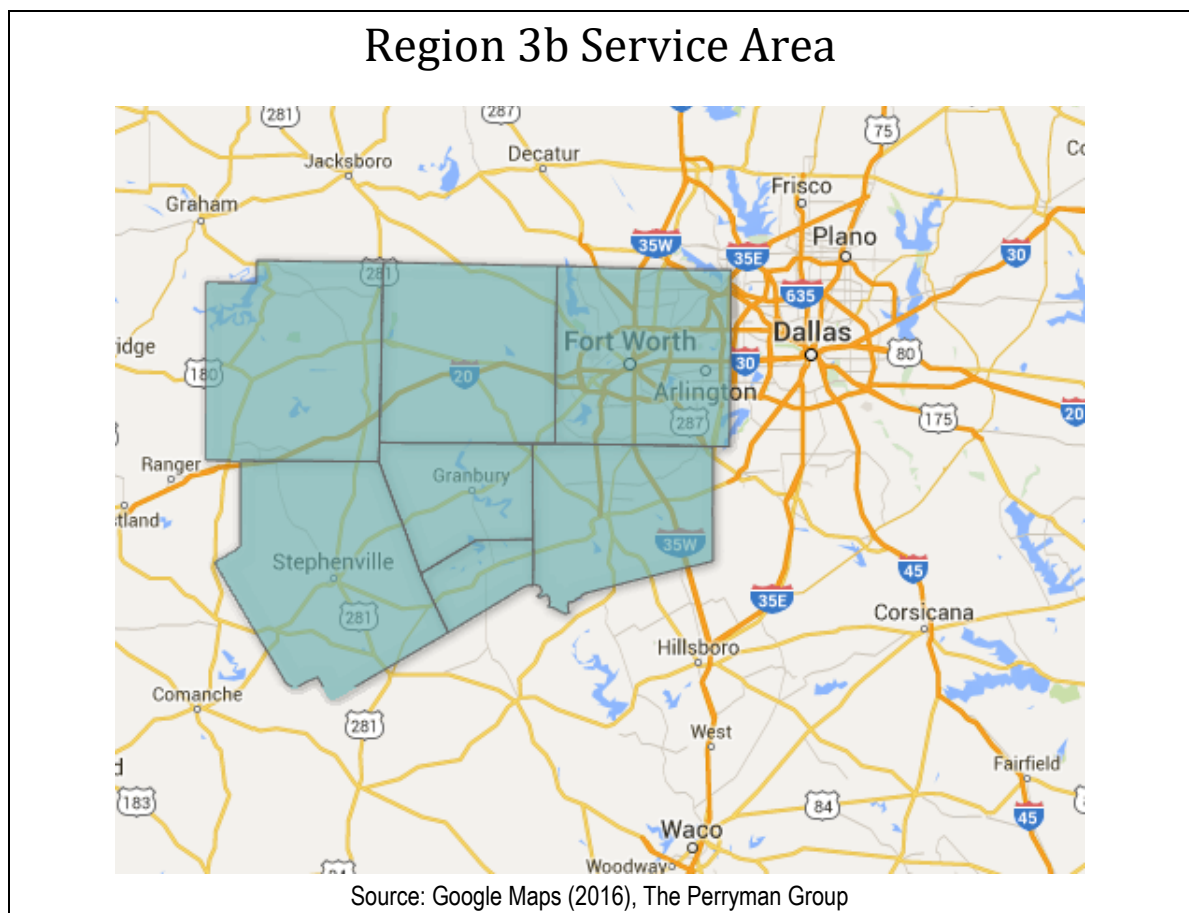
⁶ Foster Care Redesign Implementation Plan, Texas Department of Family and Protective Services, April, 2015.

⁷ Foster Care Redesign Implementation Plan, Texas Department of Family and Protective Services, April, 2015.

⁸ Foster Care Redesign Implementation Plan, Texas Department of Family and Protective Services, April, 2015.

REGION 3B

Our Community Our Kids (OCOK) began operating as the SSCC for the Region 3b service area (defined by the DFPS) in September 2014. Region 3b includes the counties of Erath, Hood, Johnson, Tarrant, Palo Pinto, Somervell, and Parker in North Texas.



As of January 22, 2016, OCOK was serving 1,338 children in foster care from Region 3b, representing 97% of all children in paid foster care in the region and 8% of the total across the state.⁹ Since its contract began, OCOK has exceeded performance measures, implementing many system improvements. Children have been placed closer to home,

⁹ Foster Care Redesign Statewide Newsletter, January 2016.

placements in family settings have increased, and foster care home capacity has been enhanced.¹⁰ In addition, more children have been moved out of Residential Treatment Centers and into therapeutic foster homes.

A recent US District Court decision (by Judge Janet Graham Jack) concluded that the current system is not working and mandated changes. The decision does not reflect the changes already underway in Region 3b, many of which are designed to eliminate some of the problems noted in Judge Jack's decision.

¹⁰ Foster Care Redesign Statewide Newsletter, November 2015.

Economic Benefits of Foster Care Redesign

Better serving and protecting Texas children is, of course, the primary reason for reforming the foster care system. As noted, however, improving outcomes of the foster care system through redesign can lead to increased productivity and earnings as well as reductions in social costs associated with child maltreatment. The vast majority of children who enter the foster care system have been subjected to some form of maltreatment, and improving outcomes through more effective oversight and approaches can lead to significant economic benefits.

Child maltreatment can include physical abuse, sexual abuse, psychological abuse, and neglect, all of which contribute to significant social service costs, morbidity, and mortality. Moreover, the effects of child maltreatment often endure over an entire lifetime. In a study in late 2014, The Perryman Group measured the economic cost of child maltreatment. When properly quantified through a comprehensive measure, every year that child maltreatment persists at current levels drains literally trillions of dollars in long-term domestic business activity. In fact, The Perryman Group's study found that the economic cost of first-time child maltreatment in the US in 2014 included almost \$5.9 trillion in lifetime spending, \$2.7 trillion in lost gross domestic product, and 27.9 million person-years of employment. In Texas, the cost was found to be more than \$450 billion in lifetime spending, \$200 billion in gross product and 2.1 million person-years of work.

The Perryman Group also estimated that each occurrence of first-time child maltreatment costs the US economy about \$1.8 million in total expenditures, \$800,000 in gross product and \$500,000 in personal income. Clearly, investment in foster care initiatives aimed at reducing root causes of ongoing maltreatment and mitigating the effects of past abuse represent an appropriate use of societal resources to ameliorate this enormous drain on economic performance and potential.

Foster care reforms have been shown to reduce the incidence of repeated child maltreatment and to mitigate the effects of earlier abuse in other areas, specifically with respect to some of the programs that are being successfully implemented by Our

Community Our Kids. The Perryman Group examined results from several studies¹¹ of outcomes in other areas which have implemented relevant foster care reforms (adjusted to reflect the characteristics of the Region 3b area) in order to develop an estimate of the potential reduction in the consequences of child maltreatment which could reasonably be expected as the Foster Care Redesign process matures and moves forward. It should be noted that, at present, the redesign program in Texas does not permit contractors to be involved in case management, an approach which has proven quite beneficial in other areas.

The Perryman Group has studied the economic consequences of child maltreatment and has developed a comprehensive model of the associated effects on business activity.¹² Direct social costs for victims include incremental expenses for health care (childhood and adult), social welfare services, criminal justice (juvenile and adult), and education.¹³ In addition, productivity and lifetime earnings are affected. These adverse outcomes, which can be substantially ameliorated by an effective foster care environment, total hundreds of thousands of dollars per victim.

The general approach used is known as an “incidence study” which evaluates the effects of the initial entries into the system during a given period (2015 in this case) over the lifetime of the affected individuals. This approach is commonly used in studies of health- and social issues and is appropriate for policy evaluation. The Perryman Group’s methodology makes extensive use of excellent recent research conducted through the National Center for Injury Prevention and Control, a part of the Centers for Disease Control and Prevention (CDC) and uses the same general categorization of quantifiable harms.¹⁴ Lifetime earnings and productivity losses also involve a substantial social cost. As the potential output from workers not available due to health issues and social dysfunction is lost, society also foregoes the total output the worker would have produced including its effects through the supply chain and reduced consumer spending

¹¹ An Analysis of the Kansas and Florida Privatization Initiatives, Casey Family Programs, April 2010; Foster Care Redesign in Duval and Alachua Counties, An Implementation Assessment and Research Chronicle, Casey Family Programs, July 2011; Improving Family Foster Care, Findings from the Northwest Foster Care Alumni Study, Casey Family Programs, Revised March 14, 2005.

¹² Suffer the Little Children: An Assessment of the Economic Cost of Child Maltreatment. The Perryman Group, November 2014.

¹³ See also Corso, P. S. and A. R. Fertig, The Economic Impact of Child Maltreatment in the United States: Are the Estimates Credible? *Child Abuse & Neglect* 34 (5) (2010).

¹⁴ Fang, Xiangming, et al., The Economic Burden of Child Maltreatment in the United States and Implications for Prevention, *Child Abuse & Neglect* 36 (2012).

stemming from lower payrolls. The Perryman Group's dynamic impact modeling process captures the overall social costs as they ripple through the economy.

As effective Foster Care Redesign reduces the incidence of repeated child maltreatment and ameliorates the effects of past abuse, a substantial portion of these economic costs can be avoided.

Measuring Economic and Fiscal Impacts

Any economic stimulus, whether positive or negative, generates multiplier effects throughout the economy. In this instance, Foster Care Redesign can result in better outcomes for children including greater safety (lower incidence of repeated maltreatment) and better opportunities (and, hence, greater earnings over time and reduced social costs associated with past abuse). The overall losses from child maltreatment stem from social costs (health care, social welfare, crime, and education) as well as lost earnings. The Perryman Group examined results of foster care reform in other geographic areas, adjusting for characteristics of Texas and the Region 3b area, to develop estimates of the economic benefits of redesign efforts.

Once the direct stimulus was quantified, the associated multiplier effects were measured using The Perryman Group's input-output assessment model (the US Multi-Regional Impact Assessment System, which is described in further detail in the Appendices to this report) developed by the firm more than 30 years ago and consistently maintained and updated since that time. The model has been used in hundreds of analyses for clients ranging from major corporations to government agencies. It uses a variety of data (from surveys, industry information, and other sources) to describe the various goods and services (known as resources or inputs) required to produce another good/service. This process allows for estimation of the total economic impact (including multiplier effects) of reducing the social costs and lost earnings stemming from child maltreatment when Foster Care Redesign is implemented. The model used in the current analysis reflects the specific industrial composition and characteristics of the Region 3b and Texas economies.

These total economic effects are quantified for key measures of business activity:

- **Total expenditures** (or total spending) measure the dollars changing hands as a result of the economic stimulus.
- **Gross product** (or output) is production of goods and services that will come about in each area as a result of the activity. This measure is parallel to the gross domestic product numbers commonly reported by various media outlets and is a subset of total expenditures.
- **Personal income** is dollars that end up in the hands of people in the area; the vast majority of this aggregate derives from the earnings of employees, but payments such as interest and rents are also included.
- **Job gains** are expressed as person-years of employment because the study is evaluating cumulative lifetime effects.

Increases in economic activity generate additional fiscal revenues such as retail sales taxes, income tax, property tax, and other levies. The Perryman Group has developed a model linking increases in economic activity to incremental taxes; in this case, the fiscal benefits were measured for (1) the state of Texas and (2) local government entities as a group (cities, counties, school districts, and special districts).

Monetary values were quantified on a constant (2015) basis on a net present value basis. See the Appendices to this report for additional information regarding the methods and assumptions used in this analysis.

REGION 3B SERVICE AREA IMPLEMENTATION

Foster Care Redesign within the Region 3b service area leads to substantial economic and fiscal benefits. While the majority of the gains occur within Region 3b, some benefits spill over into other parts of the state. The Perryman Group calculated the lifetime benefits of improving outcomes for children entering foster care during 2015; total estimated economic benefits to the Region 3b area include **\$204.5 million** in gross product and **2,355 person-years of employment**. For the state as a whole (including gains within Region 3b), economic benefits of implementation within Region 3b were estimated to be **\$222.5 million** in gross product and **2,513 person-years of employment**. Because these effects only reflect the children entering the system in a single year, they compound over time. Moreover, benefits could likely be further enhanced if case management responsibilities were assigned to Our Community Our Kids.

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Economic activity associated with redesign in Region 3b generates incremental **tax receipts to the State of an estimated \$12.4 million**, with another **\$6.0 million to local government entities** for each cohort of new entries to the system.

RETURNS PER DOLLAR OF STATE FUNDING

The Perryman Group examined these economic and fiscal effects in light of the State funding required to implement the program and found that **every dollar of State funding for Foster Care Redesign returns an estimated \$3.44 in revenue to the State over the long term**. Benefits to the economy and local governments are also multiples of the investment required to implement Foster Care Redesign.

Long-Term Return per Dollar of State Funding for Foster Care Redesign in the Region 3b Service Area* (Assumes the Our Community Our Kids approach for the 2015 Cohort)	
Total Expenditures	\$128.73
Gross Product	\$61.77
Personal Income	\$38.42
State Revenue	\$3.44
Local Revenue	\$1.66
*Achievement of these outcomes over time requires that the State provide full funding for the program. Values are expressed in constant (2015) dollars and are discounted at a 3% real (inflation-adjusted) rate. SOURCE: The Perryman Group	

STATEWIDE IMPLEMENTATION

If Foster Care Redesign using an Our Community Our Kids approach were implemented statewide and achieved the levels of success that have occurred elsewhere, the economic benefits associated with each annual cohort would include an estimated **\$3.6 billion** in gross product as well as **41,008 person-years of employment**.

Estimated Lifetime Economic Benefits of Statewide Foster Care Redesign* (Assumes the Our Community Our Kids approach for the 2015 Cohort)	
(Monetary Values in Millions of Constant 2015 Dollars)	
	Texas
Total Expenditures	\$7,567.685
Gross Product	\$3,630.918
Personal Income	\$2,258.294
Retail Sales	\$1,030.125
Employment (Person-Years)	41,008
*Includes estimated effects of reductions in social costs (social assistance, health care, education, and crime) and improvement in income and productivity associated with the Foster Care Redesign programs. The projected improvements are based on outcomes achieved in other areas employing comparable approaches, with appropriate adjustments. The analysis makes use of an "incidence" approach which examines the lifetime impact from a single annual cohort (2015 in this case). Results reflect economic benefits of redesign implemented statewide. Values are expressed in constant (2015) dollars and are discounted at a 3% real (inflation-adjusted) rate. These effects will thus be duplicated each year. More detail is provided in the Appendices to this report. SOURCE: The Perryman Group	

Economic activity associated with statewide implementation generates incremental long-term **tax receipts to the State of an estimated \$202.4 million**, with **another \$97.8 million to local government entities** as a result of each cohort.

Conclusion

Foster Care Redesign can improve outcomes for children within the system, and enhancing the safety and well-being of thousands of Texas young people is clearly the primary impetus for seeking new and innovative approaches. Such reforms can also generate notable economic benefits. At the same time, fiscal realities must be considered, and it is relevant to examine the costs of various redesign efforts relative to the gains.

The Perryman Group estimates that Foster Care Redesign as implemented by Our Community Our Kids in the Region 3b service area should lead to substantial long-term

Every dollar of State funding for Foster Care Redesign returns an estimated \$3.44 in ultimate revenue to the State over.

economic and fiscal benefits including **\$204.5 million** in gross product in the region for each annual cohort as well as **2,355 person-years of employment**. Benefits for the state (including the 3b area) are even larger. This economic activity, in turn, generates additional tax receipts to the State and local governments. Allowing the contractor to participate in case management could

further enhance these benefits.

Although redesign efforts can initially be more costly, the long-term benefits in terms of reduced social costs and increased earnings and productivity of the affected individuals lead to sizable fiscal benefits over time. In fact, The Perryman Group estimates that every dollar of State funding required for Foster Care Redesign returns an estimated **\$3.44** in ultimate revenue to the State.

Implementing reforms in Texas' large foster care system involves notable challenges. However, such initiatives are well worth pursuing, not only for the well-being of the children involved, but also for the ongoing economic benefits and long-term fiscal sustainability of the system.

APPENDICES

About The Perryman Group

- The Perryman Group (TPG) is an economic research and analysis firm based in Waco, Texas. The firm has more than 30 years of experience in assessing the economic impact of corporate expansions, regulatory changes, real estate developments, public policy initiatives, and myriad other factors affecting business activity. TPG has conducted hundreds of impact analyses for local areas, regions, and states throughout the US. Impact studies have been performed for hundreds of clients including many of the largest corporations in the world, governmental entities at all levels, educational institutions, major health care systems, utilities, and economic development organizations.
- Dr. M. Ray Perryman, founder and President of the firm, developed the US Multi-Regional Impact Assessment System (used in this study) in the early 1980s and has consistently maintained, expanded, and updated it since that time. The model has been used in hundreds of diverse applications and has an excellent reputation for reliability. A major study developed using the relevant model was recently published in *The Journal of Medical Economics*. Dr. Perryman has been asked to testify before the State legislature, Congress, and other major legislative and regulatory bodies on more than one hundred occasions, including invited testimony related to numerous social issues.
- The firm has conducted numerous investigations in the areas of public policy, the economics of health and wellness, and the economics of education. Health care and related studies include measuring the comprehensive cost of cancer (including treatment as well as lost productivity and premature mortality) on multiple occasions. In addition, the firm measured economic aspects of obesity including associated morbidity, mortality, and productivity. The Perryman Group has performed assessments of scores of major medical facilities, teaching institutions, and research programs. Representative efforts public policy studies related to health care issues include analyses of Medicaid and Children's Health Insurance Program (CHIP) funding, wellness initiatives, more extensive use of Advanced Practice Registered Nurses, mental health programs, and economics of Medicaid expansion. In the area of education, the firm has studied the economic impact of education and enhancing outcomes and educational attainment on dozens of occasions for major universities, the Bill and Melinda Gates Foundation, the Texas Higher Education Coordinating Board, and numerous others. The firm has also completed a comprehensive study of the economic costs of child maltreatment in the United States, as well as a similar analysis of the effects and consequences of hunger.

Methods Used

- The basic modeling technique employed in this study is known as dynamic input-output analysis. This methodology essentially uses extensive survey data, industry information, and a variety of corroborative source materials to create a matrix describing the various goods and services (known as resources or inputs) required to produce one unit (a dollar's worth) of output for a given sector. Once the base information is compiled, it can be mathematically simulated to generate evaluations of the magnitude of successive rounds of activity involved in the overall production process.
- There are two essential steps in conducting an input-output analysis once the system is operational. The first major endeavor is to accurately define the levels of direct activity to be evaluated. The Perryman Group evaluated results of Foster Care Redesign in other areas, including relatively recent programs in Kansas and Florida¹⁵ and long-standing private initiatives in other areas that employ similar approaches. In these areas, there are notably improved outcomes for health, educational, and earnings outcomes stemming primarily from reductions in the incidence of repeated child maltreatment and the consequences of past abuse. Findings in other areas were adjusted for Region 3b and Texas based on factors such as the relative numbers of children entering the foster care system, specific reforms implemented, and pertinent economic and demographic characteristics.
- A relatively detailed and comprehensive methodology previously developed by The Perryman Group was employed to quantify the various direct components of the cost of child maltreatment that are amenable to dynamic input-output analysis.¹⁶ This approach was modified as appropriate for the present analysis. The general approach is known as an "incidence study," which evaluates the effects of the initial incidence in a given period (2015 in this case) over the lifetime of the affected individuals. The report makes extensive use of excellent recent research conducted through the National Center for Injury Prevention and Control, a part of the Centers for Disease Control and Prevention (CDC) and uses the same general categorization of quantifiable harms.¹⁷ It goes beyond the prior work, however, in that it

¹⁵ An Analysis of the Kansas and Florida Privatization Initiatives, Case Family Programs, April 2010; Foster Care Redesign in Duval and Alachua Counties, An Implementation Assessment and Research Chronicle, Case Family Programs, July 2011; Improving Family Foster Care, Findings from the Northwest Foster Care Alumni Study, Casey Family Programs, Revised March 14, 2005.

¹⁶ Suffer the Little Children: An Assessment of the Economic Cost of Child Maltreatment. The Perryman Group, November 2014.

¹⁷ Fang, Xiangming, et al., The Economic Burden of Child Maltreatment in the United States and Implications for Prevention, *Child Abuse & Neglect* 36 (2012).

(1) updates the effects to current estimated levels, (2) uses alternative price indices in some instances which are more closely aligned with the constructs being measured, (3) determines a larger baseline level of incidence which is more consistent with the likely magnitude of child maltreatment occurrences, and (4) integrates and extends the findings from public health studies with the dynamic impact modeling process in order to more fully capture the overall social costs as they ripple through the economy. The original study contains a highly detailed description of this analytical framework and various aspects of its implementation. For the present inquiry, this model was operationalized with the expected reduction in incidence associated with foster care initiatives comparable to those being implemented by Our Community Our Kids in Region 3b.

- Once the detailed process of quantifying the potential direct effects is completed, they are simulated within the context of the input-output system to measure overall economic activity. The present study was conducted within the context of the US Multi-Regional Impact Assessment System (USMRIAS) which was developed and is maintained by The Perryman Group. This model has been used in hundreds of diverse applications across the country and has an excellent reputation for accuracy and credibility. The system used in the current simulations reflects the unique industrial structure and characteristics of Region 3b and Texas.
- The USMRIAS is somewhat similar in format to the Input-Output Model of the United States and the Regional Input-Output Modeling System, both of which are maintained by the US Department of Commerce. The model developed by TPG, however, incorporates several important enhancements and refinements. Specifically, the expanded system includes (1) comprehensive 500-sector coverage for any county, multi-county, or urban region; (2) calculation of both total expenditures and value-added by industry and region; (3) direct estimation of expenditures for multiple basic input choices (expenditures, output, income, or employment); (4) extensive parameter localization; (5) price adjustments for real and nominal assessments by sectors and areas; (6) measurement of the induced impacts associated with payrolls and consumer spending; (7) embedded modules to estimate multi-sectoral direct spending effects; (8) estimation of retail spending activity by consumers; and (9) comprehensive linkage and integration capabilities with a wide variety of econometric, real estate, occupational, and fiscal impact models. The model has been thoroughly tested for reasonableness and historical reliability.
- The impact assessment (input-output) process essentially estimates the amounts of all types of goods and services required to produce one unit (a dollar's worth) of a specific type of output. For purposes of illustrating the nature of the system, it is useful to think of inputs and outputs in dollar (rather than physical) terms. As an example, the construction of a new building will require specific dollar amounts of lumber, glass, concrete, hand tools, architectural services, interior design services, paint, plumbing, and numerous other elements. Each of these suppliers

must, in turn, purchase additional dollar amounts of inputs. This process continues through multiple rounds of production, thus generating subsequent increments to business activity. The initial process of building the facility is known as the *direct effect*. The ensuing transactions in the output chain constitute the *indirect effect*.

- Another pattern that arises in response to any direct economic activity comes from the payroll dollars received by employees at each stage of the production cycle. As workers are compensated, they use some of their income for taxes, savings, and purchases from external markets. A substantial portion, however, is spent locally on food, clothing, health care services, utilities, housing, recreation, and other items. Typical purchasing patterns in the relevant areas are obtained from the *ACCRA Cost of Living Index*, a privately compiled inter-regional measure which has been widely used for several decades, and the *Consumer Expenditure Survey* of the US Department of Labor. These initial outlays by area residents generate further secondary activity as local providers acquire inputs to meet this consumer demand. These consumer spending impacts are known as the *induced effect*. The USMRIAS is designed to provide realistic, yet conservative, estimates of these phenomena.
- Sources for information used in this process include the Bureau of the Census, the Bureau of Labor Statistics, the Regional Economic Information System of the US Department of Commerce, and other public and private sources. The pricing data are compiled from the US Department of Labor and the US Department of Commerce. The verification and testing procedures make use of extensive public and private sources.
- Impacts were measured in 2015 dollars.
- The USMRIAS generates estimates of the effect on several measures of business activity. The most comprehensive measure of economic activity used in this study is **Total Expenditures**. This measure incorporates every dollar that changes hands in any transaction. For example, suppose a farmer sells wheat to a miller for \$0.50; the miller then sells flour to a baker for \$0.75; the baker, in turn, sells bread to a customer for \$1.25. The Total Expenditures recorded in this instance would be \$2.50, that is, \$0.50 + \$0.75 + \$1.25. This measure is quite broad, but is useful in that (1) it reflects the overall interplay of all industries in the economy, and (2) some key fiscal variables such as sales taxes are linked to aggregate spending.
- A second measure of business activity frequently employed in this analysis is that of **Gross Product**, the most commonly reported statistic regarding national economic performance. It is defined as the value of all final goods produced in a given region for a specific period of time. Stated differently, it captures the amount of value-added (gross area product) over intermediate goods and services at each stage of the production process, that is, it eliminates the double counting in the Total Expenditures concept. Using the example above, the Gross Product is

\$1.25 (the value of the bread) rather than \$2.50. Alternatively, it may be viewed as the sum of the value-added by the farmer, \$0.50; the miller, \$0.25 (\$0.75 - \$0.50); and the baker, \$0.50 (\$1.25 - \$0.75). The total value-added is, therefore, \$1.25, which is equivalent to the final value of the bread. In many industries, the primary component of value-added is the wage and salary payments to employees.

- The third gauge of economic activity used in this evaluation is **Personal Income**. As the name implies, Personal Income is simply the income received by individuals, whether in the form of wages, salaries, interest, dividends, proprietors' profits, or other sources. It may thus be viewed as the segment of overall impacts which flows directly to the citizenry.
- The fourth measure, **Retail Sales**, represents the component of Total Expenditures which occurs in retail outlets (general merchandise stores, automobile dealers and service stations, building materials stores, food stores, drugstores, restaurants, and so forth). Retail Sales is a commonly used measure of consumer activity.
- The final aggregate used is **Permanent Jobs and Person-Years of Employment**. The Person-Years of Employment measure reveals the full-time equivalent jobs generated by an activity. It should be noted that, unlike the dollar values described above, Permanent Jobs is a "stock" rather than a "flow." In other words, if an area produces \$1 million in output in 2010 and \$1 million in 2011, it is appropriate to say that \$2 million was achieved in the 2010-2011 period. If the same area has 100 people working in 2010 and 100 in 2011, it only has 100 Permanent Jobs. When a flow of jobs is measured, such as in a construction project or a cumulative assessment over multiple years, it is appropriate to measure employment in Person-Years (a person working for a year). This concept is distinct from Permanent Jobs, which anticipates that the relevant positions will be maintained on a continuing basis.

Detailed Sectoral Results

Economic Benefits of Implementing the Foster Care Redesign Efforts of Our Community Our Kids in Region 3b

The Total Estimated Lifetime Impact of the Benefits (Reduced Social Costs and Increased Earnings) Associated with Implementing the Foster Care Redesign Efforts of Our Community Our Kids in Region 3b for the 2015 Cohort on Business Activity in the Service Area

Sector	Total Expenditures <i>(2015 Dollars)</i>	Real Gross Product <i>(2015 Dollars)</i>	Personal Income <i>(2015 Dollars)</i>	Employment <i>(Person-Years)</i>
Agriculture	\$8,605,841	\$2,335,306	\$1,509,552	24
Mining	\$11,384,215	\$2,620,644	\$1,259,313	7
Construction	\$16,688,658	\$8,379,414	\$6,905,158	100
Nondurable Manufacturing	\$54,847,284	\$15,834,296	\$8,361,761	137
Durable Manufacturing	\$25,376,380	\$10,235,162	\$6,656,206	91
Transportation and Utilities	\$31,940,352	\$14,501,581	\$8,861,748	110
Information	\$10,454,614	\$6,382,795	\$2,767,963	27
Wholesale Trade	\$18,953,063	\$12,822,580	\$7,393,616	86
Retail Trade	\$60,830,191	\$45,484,284	\$26,417,062	837
Finance, Insurance, and Real Estate	\$82,234,012	\$28,487,946	\$10,583,721	110
Business Services	\$27,511,063	\$17,720,806	\$14,455,638	181
Health Services	\$35,116,040	\$23,362,994	\$19,753,628	335
Other Services	\$31,578,805	\$16,319,306	\$12,987,463	309
TOTAL	\$415,520,517	\$204,487,113	\$127,912,829	2,355

Source: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Includes estimated effects of reductions in social costs (social assistance, health care, education, and crime) and improvement in income and productivity associated with the Foster Care Redesign programs. The projected improvements are based on outcomes achieved in other areas employing comparable approaches, with appropriate adjustments. The analysis makes use of an "incidence" approach which examines the lifetime impact from a single annual cohort (2015 in this case). Values are expressed in constant (2015) dollars and are discounted at a 3% real (inflation-adjusted) rate. These effects will thus be duplicated each year. More detail is provided in the Appendices this report.

The Total Estimated Lifetime Impact of the Benefits (Reduced Social Costs and Increased Earnings) Associated with Implementing the Foster Care Redesign Efforts of Our Community Our Kids in Region 3b for the 2015 Cohort on Business Activity in Texas

Sector	Total Expenditures	Real Gross Product	Personal Income	Employment
	<i>(2015 Dollars)</i>	<i>(2015 Dollars)</i>	<i>(2015 Dollars)</i>	<i>(Person-Years)</i>
Agriculture	\$15,630,113	\$4,327,097	\$2,770,432	44
Mining	\$14,429,464	\$3,381,945	\$1,761,207	10
Construction	\$16,856,545	\$8,465,046	\$6,975,724	101
Nondurable Manufacturing	\$60,567,525	\$17,147,306	\$9,012,778	146
Durable Manufacturing	\$26,543,569	\$10,760,288	\$7,006,878	95
Transportation and Utilities	\$41,207,810	\$16,663,816	\$9,840,459	116
Information	\$13,330,879	\$8,147,052	\$3,522,024	34
Wholesale Trade	\$20,608,083	\$13,942,150	\$8,039,168	94
Retail Trade	\$63,136,681	\$47,223,203	\$27,429,495	869
Finance, Insurance, and Real Estate	\$90,873,827	\$31,091,971	\$11,563,168	121
Business Services	\$31,718,240	\$20,352,415	\$16,602,357	208
Health Services	\$35,981,153	\$23,953,844	\$20,253,197	344
Other Services	\$32,941,976	\$17,083,983	\$13,634,653	332
TOTAL	\$463,825,865	\$222,540,116	\$138,411,541	2,513

Source: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Includes estimated effects of reductions in social costs (social assistance, health care, education, and crime) and improvement in income and productivity associated with the Foster Care Redesign programs. The projected improvements are based on outcomes achieved in other areas employing comparable approaches, with appropriate adjustments. The analysis makes use of an "incidence" approach which examines the lifetime impact from a single annual cohort (2015 in this case). Values are expressed in constant (2015) dollars and are discounted at a 3% real (inflation-adjusted) rate. These effects will thus be duplicated each year. More detail is provided in the Appendices this report.

Economic Benefits of Implementing the Foster Care Redesign Efforts of Our Community Our Kids Statewide

The Total Potential Lifetime Impact of the Benefits (Reduced Social Costs and Increased Earnings) Associated with Implementing the Foster Care Redesign Efforts of Our Community Our Kids on a Statewide Basis for the 2015 Cohort on Business Activity in Texas

Sector	Total Expenditures	Real Gross Product	Personal Income	Employment
	<i>(2015 Dollars)</i>	<i>(2015 Dollars)</i>	<i>(2015 Dollars)</i>	<i>(Person-Years)</i>
Agriculture	\$255,017,628	\$70,600,007	\$45,201,788	723
Mining	\$235,428,093	\$55,179,102	\$28,735,489	168
Construction	\$275,027,835	\$138,113,906	\$113,814,445	1,642
Nondurable Manufacturing	\$988,206,993	\$279,771,834	\$147,050,593	2,383
Durable Manufacturing	\$433,079,286	\$175,562,594	\$114,322,753	1,555
Transportation and Utilities	\$672,337,961	\$271,883,317	\$160,554,858	1,887
Information	\$217,503,810	\$132,925,582	\$57,464,602	559
Wholesale Trade	\$336,237,147	\$227,477,180	\$131,165,371	1,531
Retail Trade	\$1,030,124,798	\$770,483,835	\$447,533,867	14,176
Finance, Insurance, and Real Estate	\$1,482,678,224	\$507,290,051	\$188,662,221	1,968
Business Services	\$517,508,122	\$332,065,725	\$270,880,556	3,388
Health Services	\$587,060,922	\$390,825,878	\$330,446,903	5,613
Other Services	\$537,474,344	\$278,738,668	\$222,460,122	5,415
TOTAL	\$7,567,685,163	\$3,630,917,679	\$2,258,293,567	41,008

Source: US Multi-Regional Impact Assessment System, The Perryman Group

NOTE: Includes estimated effects of reductions in social costs (social assistance, health care, education, and crime) and improvement in income and productivity associated with the Foster Care Redesign programs. The projected improvements are based on outcomes achieved in other areas employing comparable approaches, with appropriate adjustments. The analysis makes use of an "incidence" approach which examines the lifetime impact from a single annual cohort (2015 in this case). Values are expressed in constant (2015) dollars and are discounted at a 3% real (inflation-adjusted) rate. These effects will thus be duplicated each year. More detail is provided in the Appendices this report.